

IN THE SPECIFICATION:

Please delete the first sentence of the specification following the title that recites "This is a continuation, division, of application no. 09/255,371, filed February 21, 1999" and replace therefor:

01 This application is a continuation of United States Application No. 09/255,371, filed February 22, 1999, now United States Patent 6,355,854.

IN THE CLAIMS\*:

Please cancel claims 1-5, 7, 12 and 68.

Please amend claims 6, 11 and 69 as follows:

02 6. (Three times amended) A process for the oxidative dehydrogenation of an alkane having from 2 to 4 carbon atoms to an alkene, comprising contacting said alkane in the presence of oxygen to a compound that includes at least about 50% nickel oxide by weight at a temperature of about 400°C or less, wherein said contacting is conducted in the presence of <sup>112</sup>said alkene, and obtaining a selectivity in said dehydrogenation of greater than 70% and a conversion of greater than 10%.

03 11. (Twice Amended) A process for the oxidative dehydrogenation of an alkane having from 2 to 4 carbon atoms to an alkene, comprising

\* An "Appendix to Amendments" is enclosed, showing the amendments to the claims. In the Appendix, the added portion of text is underscored and the deleted portion is bracketed.

providing a reactor and a reactor feed comprising a gas mixture,  
wherein said gas mixture comprises said alkane, said alkene and oxygen;

03  
contacting said gas mixture to a catalyst that includes at least about  
50% nickel oxide in said reactor, wherein said contacting is performed at a temperature of  
about 400°C or less; and

obtaining a selectivity greater than 70% and a conversion greater than  
10%.

69. (Amended) The method according to claim 67, wherein the  
104  
contacting step is carried out at a temperature of about 400°C or less.

Please add the following claims:

70. (Added) The method according to claim 6, wherein said alkane is  
ethane and said alkene is ethylene.

71. (Added) The method according to claim 6, wherein said catalyst  
further comprises niobium oxide, tantalum oxide or a combination thereof.

05  
72. (Added) The method according to claim 6, wherein said temperature  
is between about 250°C and 400°C.

73. (Added) The method according to claim 11, wherein said alkane is  
ethane and said alkene is ethylene.

74. (Added) The method according to claim 11, wherein said catalyst  
further comprises niobium oxide, tantalum oxide or a combination thereof.